**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Midterm Review Questions**

Each student must complete astronomy questions but students can decide whether to complete unit 3 or unit 4 questions. This must be completed on a separate sheet of paper. *Due on the day of your exam: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

**Unit 2: Astronomy**

1. Explain barycenter by relating it to the Earth and the Moon as an example. What is the key idea to understanding barycenter?

2. Nuclear fusion produces energy in the sun’s core by fusing atoms together. Which atoms are fused, and which atoms are produced? Draw a three-step comic strip outlining this process. Be sure to label your comics and include a caption for each step.

3. What protects Earth from dangerous solar winds, solar radiation, cosmic rays, X rays and some electromagnetic waves? Describe in full detail the two different types of protection and how they are different.

4. How are solstice & equinox related to the revolution around the sun? Draw a picture to help describe this relationship.

5. Describe the importance of Kepler’s 1st law.

6. The earth’s 23.5-degree tilt creates seasons. Draw a picture showing the northern hemisphere experiencing summer. Then draw an image to compare and contrast the tilt when the northern hemisphere is experiences winter.

7. By incorporating the Big Bang Theory explain the hierarchy of the universe. Put 4 examples in order.

8. The earth’s orbit is an ellipse, and therefore any position in the orbit is not equidistant to the sun. Knowing this information, does the earth revolve around the earth at the same speed at all times? When is it the fastest? When is it the slowest?

**Unit 3: Rocks & Soil**

9. Why is the Grand Canyon famously used to study weathering and erosion? Hint: think back to case study homework.

10. Weathering and erosion may differ by locations. What types would you expect in a:

a. Dry and Arid Dessert Climate?

b. Warm and Wet Tropical Forest?

c. On the side of the Mississippi River bed?

Include a brief explanation for your answer.

11. Biological activity is a major cause of mechanical weathering. Give three examples.

12. What does a metamorphic rock look like? How would you know you were looking at one? How does this relate to its formation?

13. There are two types of sedimentary rocks. How can you tell them apart? Briefly describe how they form differently.

14. Gravity is described as an agent of erosion that cannot act alone. Explain what this means using one example.

15. What rock is created from the process of weathering, erosion and deposition?

16. Name a method that could be used to prevent erosion in the following situations:

 a. Shoreline

b. Farm

c. Pavement run-off

**Unit 4: Plate Tectonics**

17. Compare and contrast the lithosphere and asthenosphere.

18 Analyze the differences in composition, thickness, and state of matter between the inner and outer core.

19. Explain how density plays a role in convection currents.

20. There are three types of subduction. Describe each and the landforms these create.

21. Name two pieces of evidence for the theory of plate tectonics.

22. Draw a picture of a volcano. Label your diagram with the anatomy of a volcano.

23. What is the San Andres Fault? Why is this important to study in plate tectonics?

24. Draw a picture of an earthquake and label the focus, fault and epicenter.